



SWARC NEWS-03/24

Notes from KO4ZFO (Rodney)

It was good to see you all at the meeting. Don't forget our Spring Tune Up, the weekend before Easter. For more information, please reach out to Ken Castile. We also are looking for volunteers at the South Wake booth for RARSfest. Also, reach out to any member you haven't heard from recently or are going through any hardships. It doesn't have to be health related. We all go through hardships in life, and it doesn't take much to lend an ear/hand or just a few minutes of your time.

Please remember our fellow members who are dealing with various medical situations. I am sure they will be listed later in the newsletter, but please reach out to these members. Even just a phone call can brighten their day and give them the encouragement through their recovery.

Thanks again,
Rodney
KO4ZFO

Apparently, the Legion cannot make up their mind on our meeting place, so be sure to pay attention to location given in Sign Up Genius invitation when it is sent out.

We ask you to keep the following in your thoughts and prayers:

Gary, KO4LQX, Kenny, KJ4CVK, Steve, KA0GMY, Bernie Jones (N4BAJ), and the family of Danny Hampton, K4ITL (SK).



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Steve, KA0GMY, continues to have health issues, so remember him, Steve Jr., and Miss Gloria as well (particularly).

Gary Plante, KO4LQX, reports: 'I had a scan last week and there were no signs of new growth I'm also scheduled for a scoping with my ENT Tuesday along with the three-week routine of labs, oncologist visit and immunotherapy if all looks good with the scoping, I will get the immunotherapy that day. I'm still hanging in there so far and I still plan on getting on the net more often but probably more of the afternoon nets.' He really needs our prayer support for his continued health battles (report from Richard Hall).

Kenny (KJ4CVK), has ongoing health issues, so keep him in your thoughts. Consider reaching out to him to give him a boost in his spirits.

Bernie (N4BAJ) has been fighting a cold or flu for many weeks and reportedly is finally starting to feel better.

Notes from WB4SMS (Steve)

SWARC Members,

Thanks to all that attended the monthly meeting Wednesday evening. We had some good memories of Danny Hampton shared with the group, as there was a good showing of members at his service earlier in the day. I did a quick presentation on band pass filters and shared a QST article and parts list (attached to this newsletter email) with the folks in attendance. These are easy to make and not as expensive as buying a



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premade one. These would be a great thing to add to your go box for Field Day this year based on the interferences we experienced last June. If you build one and bring it to Field Day, you get first Dibbs on that frequency when it comes time to assign them for operating at Field Day.

Rodney and I are also working on a schedule for the day so we can get invitations out to the general public and still do our family picnic. Speaking of food, if you have a suggestion, other than hot dogs and hamburgers, please let us know.

73,
Steve WB4SMS

SWARC 6 March 2024 Meeting Minutes

The meeting was well attended and there was enough pizza for everyone—this was done so that members could attend Danny Hampton's funeral early in the afternoon without having to worry about bringing food to the meeting.

Those in physical attendance were:

Richard Hall (K7RLH), Bill Blomgren (KK4QDZ), Al Crawford (WA4TCJ), Linda Crawford (KI4LO), Christy Fernandini (KJ4AEO), Rich Gehle (KZ4ET--formerly N4DPQ) and wife Jane, Brian Knox (KK4BK), Ken Castille (KN4GUS), Robert Walker (KQ4GSA), Michael Carter (KY4OA), Steve Worth (NC4SW), Phil Warnick (KQ4MSQ), Ed Castle (N1WMM), and wife Karen (KB1IEP). Our only guest was Nancy Torborg (KB2TNR)



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who spoke to us about RARSfest—she sold some tickets and table or two for members to sell their goodies.

The meeting was opened at 7:01 pm, with the Pledge of Allegiance led by Brian Knox (KK4BK) and introductions were made around the room. Officer and chair reports are included in the body of these minutes or as newsletter items from our President and Vice President.

Old/Unfinished Business

President Rodney (KO4ZFO) continued the discussion about Field Day—note that it is on 22-23 June and not the last weekend of the month.

New Business

Brian (KK4BK) moved that we donate \$250 to Danny Hampton's church; seconded and passed.

Brian (KK4BK) reminded us of upcoming officer and board elections and to consider volunteering for one of the positions or nominating someone else for the job(s).

Rodney (KO4ZFO) asked members to provide their phone numbers so that we can more easily reach out and keep up with needs of our members. Send phone numbers to Richard (K7RLH) at k7rlh@hotmail.com.

Program/Presentation

There was no official program for the evening, however, Steve (WB4SMS) gave a brief presentation on building band pass filters, including an article from QST and a parts list for various frequencies.



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Both items are attached to the email sending out the newsletter since they are double-side printed and could not be scanned easily to fit the body of the newsletter.

Ken (KN4GUS) talked about a 'spring tune-up' that he has planned for 30 March at Crowder District Park, 4709 Ten-Ten Road; he has the 'Robin' shelter reserved and he plans to be there between 10:00 am and 2:00 pm. Bring your gear, antennas, etc. and operate just for fun.

Public Service

Dave Krum (NW3U) was not present, but he recently sent a reminder to sign up for events at the website listed below.

Check the HPSNC.org web site often for Public Service opportunities. The public service season is upon us and events need volunteers. You may also get to public service events on the RARS and SWARC websites.

TREASURER'S REPORT

Christy Fernandini's report detailed \$100.00 cash addition with deductions of \$371.24 which covered several fees and the flowers for Danny Hampton's funeral. Balance of \$1,798.74 with no obligated funds or invoices outstanding.

The meeting was officially adjourned around 7:50 pm.

Respectfully submitted,



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Richard Hall K7RLH

Secretary and Newsletter Editor

MEMBERSHIP

You can bring a check or cash for dues to the next meeting or mail them to the club PO box and Christy will advise she has received them. Also, you can now renew somewhat online by contacting Christy and giving her the appropriate credit card info for the 'Square' account. Christy's email is christyfernandini@outlook.com. Make checks payable to South Wake ARC and send to South Wake ARC – PO Box 1565 – Fuquay Varina, NC 27526

NET REPORT

SWARC Group – February 2024

The monthly total of check-ins was 310—a significant uptick from last month! Note that **not** all net controls record their counts so numbers could actually be higher than recorded.

- Saturday and Sunday evenings will be called by KT4JR & K7RLH
- KO4ZFO will call Monday evenings
- KN4OEY will call Tuesday evenings
- KK4BK will call Wednesday evenings except on meeting nights
- KO4ZFO or a board member will call Thursday evenings



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- Fridays will continue to be called by NC4MP
- And we need backups – JUST BECAUSE.

Please contact Rodney Warren (KO4ZFO) or Don Nicholson (KN4OEY), if you are interested in calling one or more nets.

SWARC Mission Statement

South Wake ARC's primary purpose is to further the Amateur Radio Service through programs, activities, and education, in order to promote the radio knowledge, fraternalism and individual operating efficiency of its members. Further, it shall be our purpose to support the welfare of our community through public service including radio communications for emergency situations and public events, and through providing information, training, and assistance to individuals or organizations with an interest in the Amateur Radio Service. Refer to the SWARC web site for the Board of Directors/Officers and Appointed Positions.

LINKS (if you have other links you want added then send them to me)

PRN

A Wide Area Digital Amateur Radio Network

www.ncprn.net

GigaParts

www.gigaparts.com

QRZ

www.qrz.com

Ham Radio Outlet HRO

www.hamradio.com



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Raleigh Amateur Radio Society RARS

www.rars.org

Johnson Amateur Radio Society JARS

www.jars.net

South Wake Amateur Radio Club SWARC

www.southwakearc.com

Carolina 440 Network

www.carolina440.net

North Carolina Packet

www.ncpacket.com

TARPN (Terrestrial Amateur Packet Radio Net)

www.tarpn.net

Useful Ham Info

www.torborg.com/a

Five County Ham Radio Enthusiasts

www.fivecountyhre.org

Special Notice:

For those of you who may not be on our regular nets and other info sources, we want you to know that Danny Hampton, K4ITL, became a Silent Key on 28 February 2024. Danny and Rose Hampton are stalwarts among the local ham community; notice all the repeaters with K4ITL as the call sign and you will quickly see the impact that he/they had in the state and local area.

Danny will be sorely missed by all that knew him or knew of him. He was the technical guru for repeaters and technical info for most any electronic gear. His skills were amazing given that he was blind from birth and achieved success in all his endeavors by sheer determination and desire to learn.



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Stay tuned for future info regarding repeater trusteeship and how we, the ham operators that these repeaters support, can help preserve the fantastic network that he created over the years.

On the Air

Sponsored by [Icom](https://www.icom.com)

The Joys of Being a General

The January/February 2024 issue of *On the Air* featured a story from Brian McSpadden Gardener, KE8JVX, about "The First-Year Experiences of a General-Class Ham," in which Brian detailed how he got his feet wet as a General, and how he put together his first station for HF. Brian joins this episode of the podcast to tell us a little more about his first year as a General, as well as what he's done since then.



ARRL Audio News

Listen to [ARRL Audio News](https://www.arrl.org/audio-news), available every Friday. ARRL Audio News is a summary of the week's top news stories in the world of amateur radio and ARRL, along with interviews and other features.

The On the Air podcast and ARRL Audio News are available on blubrry, iTunes, and Apple Podcasts -- [On the Air](https://www.arrl.org/audio-news) | [ARRL Audio News](https://www.arrl.org/audio-news).



Announcements

This year, George Washington's birthday will be celebrated by three amateur radio clubs. From 1500Z to 2100Z on February 17, the [Washington Area Amateur Radio Club](https://www.w0arc.org), W0ARC, will be active on 7.071, 7.200, 14.071, 14.275, 21.074, 21.310, 28.071, and 28.350 MHz, as well 10, 15, 20, and 40 MHz phone. A commemorative QSL card will be available for those who send a self-addressed stamped envelope to Mark Lukins, AB0DX, at 802 N Second Ave in Washington, Iowa (zip code 52353). On February 18 - 19, from 1500Z to 2000Z, the [Mount Vernon Amateur Radio Club](https://www.mvarc.org) (MVARC) will operate from George Washington's Mount Vernon estate on 7.042, 7.242, 14.042, and 14.242 MHz. For more information, email social@mvarc.org. The [Columbia Basin DX Club](https://www.ws7g.org), WS7G, will celebrate Washington's birthday on February 21 - 24 from 0001Z to 2359Z. WS7G will operate on 14.322, 14.255, 7.222, and 7.260



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MHz. For a commemorative certificate and a QSL card, contact Brian Nielson, W7BJN, at 11650 Road 1 SE in Monitor, Washington (zip code 98836).

In Brief...

As part of the Amateur Radio on the International Space Station (ARISS) program, students at Lilburn Elementary School in Lilburn, Georgia, were able to contact the International Space Station (ISS) on February 7 and talk to astronaut Jasmin Moghbeli, KI5WSL. The contact took place with help from Daryl Young, K4RGK, ARISS representative and member of the North Fulton Amateur Radio League (NFARL). Students were able to ask 15 questions, ranging from "What is the grossest thing about living in space?" to "Have you read the *Dog Man* books?" Astronaut Moghbeli said that collecting and loading the trash into a special waste vehicle is the grossest job on the ISS. As for the *Dog Man* books, she has not read them -- yet -- but would be interested in trying them. She also talked about growing tomatoes in space, and how her most important job on the ISS is brushing her teeth every morning. You can view [a recording of the contact on YouTube](#).

ARISS is a cooperative venture of international amateur radio societies and the space agencies that support the ISS. In the US, participating organizations include NASA's Space Communications and Navigation (SCaN) program, the ISS National Laboratory -- Space Station Explorers, [ARRL](#), and AMSAT.

The [SouthWest Ohio DX Association](#) (SWODXA), in conjunction with Icom® America, Inc., has announced a DX Mentor Recognition Program to recognize and reward amateur radio operators who have helped others achieve [DXCC](#). An application form is now available for those who wish to nominate their DX mentor. Amateurs who have received mentoring from a nominee must be under 30 years of age during the calendar year of the award; targeting this age group is meant to keep such amateurs engaged in the hobby after they achieve DXCC. The judging committee will comprise SWODXA representatives and a representative from both the Northern California DX Foundation (NCDXF) and the International DX Association (INDEXA). The awards will be presented at the DX Dinner, held annually in conjunction with [Dayton Hamvention®](#). More information and the entry form can be found at www.swodxa.org/DX-Mentor-Program or by emailing thedxmentor@gmail.com.

The K7RA Solar Update

Tad Cook, K7RA, of Seattle, Washington, reports for this week's ARRL Propagation Bulletin, ARLP006:



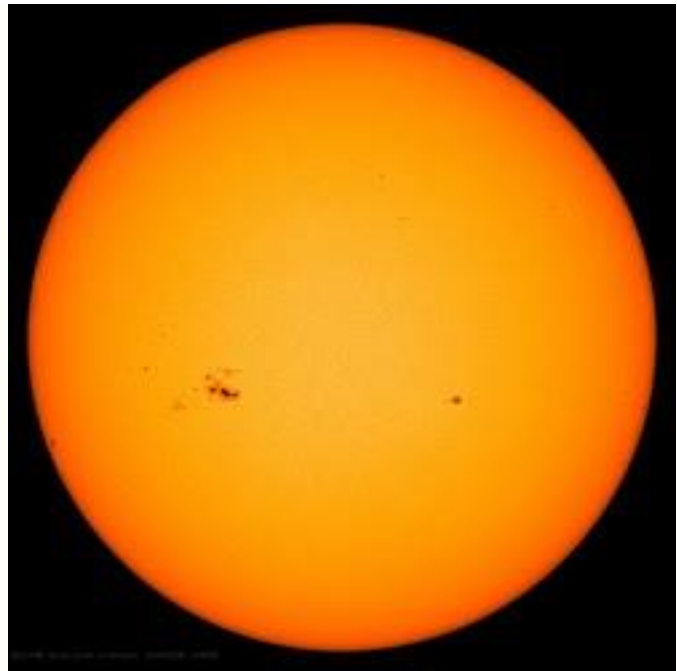
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Over the recent reporting week (February 1 - 7) ten new sunspot groups emerged: five on February 1, one on February 2, another on February 3, two on February 5, and one more on February 7.

Sunspot numbers and solar flux rose, and geomagnetic numbers were quieter.

The average daily sunspot number increased from 71.8 to 142.3, and the average daily solar flux rose from 145.4 to 165.5.

Geomagnetic conditions were quieter. The average daily planetary A index decreased from 6.9 to 5.1, and the average middle latitude numbers decreased from 5.6 to 4.4.



This solar disk image was taken on February 8, 2024. [Photo courtesy of NASA SDO/HMI]

The following data is sourced from the US Air Force and the National Oceanic and Atmospheric Administration (NOAA):

Predicted solar flux is 180, 175, 170, 172, and 178 on February 8 - 12; 180, 182, 165, and 170 on February 13 - 16; 160 on February 17 - 21; 165 and 160 on February 22 - 23; 150 on February 24 - 28; 155, 160, and 165 on February 29 through March 2, and 170 on March 3 - 5.

Predicted planetary A index is 5, 15, 12, and 8 on February 8 - 11; 5 on February 12 - 25; 8 and 7 on February 26 - 27, and 5 on February 28 through March 2.

Visit the following websites for recent solar news:

IFL Science: <https://bit.ly/3uqpnmV>;

The Independent Digital News and Media Limited United Kingdom: <https://bit.ly/3SMk8Y1>

Space.com: <https://bit.ly/3SPqwxD>

News Nine India: <https://bit.ly/4bw6j7y>

The Mint India: <https://bit.ly/49Kyog7>



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[earth.com](https://bit.ly/3SzUzrQ): <https://bit.ly/3SzUzrQ>

Sunspot numbers for February 1 through 7, 2024, were 113, 131, 123, 138, 152, 175, and 164, with a mean of 142.3. The 10.7-centimeter flux was 136.9, 142.6, 156.4, 170.4, 173.4, 190.3, and 188.4, with a mean of 165.5. Estimated planetary A indices were 5, 3, 3, 6, 7, 8, and 4, with a mean of 5.1. Middle latitude A index was 4, 3, 2, 5, 6, 8, and 3, with a mean of 4.4.

Send your tips, questions, or comments to k7ra@arrl.net.

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers Mean...", and [check out](#) the Propagation Page of Carl Luetzelschwab, K9LA.

A propagation bulletin [archive](#) is available. For customizable propagation charts, visit the [VOACAP Online for Ham Radio](#) website.

[Share](#) your reports and observations.

A weekly, full report is posted on [ARRL News](#).

Just Ahead in Radiosport

- February 12 -- 4 States QRP Group Second Sunday Sprint (CW, phone)
- February 12 - 16 -- [ARRL School Club Roundup](#) (CW, phone)
- February 14 -- PODXS 070 Club Valentine Sprint (digital)
- February 14 -- NAQCC CW Sprint (CW)
- February 14 -- DARC FT4 Contest (FT4)
- February 14 -- RSGB 80m Club Championship, Data (digital)
- February 15 - 16 -- Walk for the Bacon QRP Contest (CW)
- February 15 -- NTC QSO Party (CW)

Visit the [ARRL Contest Calendar](#) for more events and information.

Upcoming Section, State, and Division Conventions

- February 24 | [Central Dakota Amateur Radio Club](#), hosting the ARRL North



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Dakota State Convention, Bismarck, North Dakota

- February 24 | [HAM-CON](#), hosting the ARRL Vermont State Convention, Colchester, Vermont
- March 1 - 2 | [Greater Houston HamFest](#), hosting the ARRL West Gulf Division Convention, Rosenberg, Texas
- March 8 - 9 | [Acadiana DX Association Hamfest & Swapmeet](#), hosting the ARRL Louisiana State Convention, Rayne, Louisiana
- March 16 | [49th Annual Stuart Hamfest](#), hosting the ARRL Southern Florida Section Convention, Stuart, Florida
- March 16 | [St. Patrick's Day Hamfest](#), hosting the ARRL West Texas Section Convention, Midland, Texas
- April 6 | [Raleigh Hamfest](#), hosting the ARRL Roanoke Division Convention, Raleigh, North Carolina
- April 12 - 13 | [Green Country Hamfest 2024](#), hosting the ARRL Oklahoma State Convention, Claremore, Oklahoma
- April 20 | [Delmarva Amateur Radio and Electronics Expo](#), hosting the ARRL Delaware State Convention, Georgetown, Delaware

Search the [ARRL Hamfest and Convention Database](#) to find events in your area.

Have News for ARRL?

Submissions for the ARRL Letter and ARRL News can be sent to news@arrl.org. --
John E. Ross, KD8IDJ, ARRL News [Editor](#)

Bob Heil, K9EID, Silent Key

The man who defined the sound of live rock 'n' roll music and brought audio engineering principals into mainstream amateur radio use, Dr. Bob Heil, K9EID, has passed away at the age of 83.



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He was an ARRL Life Member and in the ARRL Maxim Society. A Facebook post from Heil Ham Radio paid tribute to their founder: "Bob fought a valiant, yearlong battle with cancer, and passed peacefully surrounded by his family."

Heil founded Heil Sound in 1966, through which he created the template for modern concert sound systems for musicians like the Grateful Dead, The Who, Joe Walsh, and Peter Dinklage.

The talk box used on iconic live record *Frampton Comes Alive!* was Heil's design. His audio engineering products have been featured in the Rock & Roll Hall of Fame, and he was honored in 2007 with the Parnelli Audio Innovator Award for his impact on the live sound industry. "My life has been about achieving great sound, whether on the concert stage or in the amateur radio world," Bob Heil [recounted in 2022](#). "I've watched Heil Sound go from a regional sound company to a world-class microphone manufacturer. This company has been my passion," he said.

Parallel to his commercial and artistic success in live music, was his passion for amateur radio. He was active in ham radio from a young age, and he merged his expertise in audio engineering with his love for radio. Heil Ham Radio was founded to produce microphones, headsets, and other gear for radio amateurs with an emphasis on high-quality audio.

Heil was known as a mentor who enjoyed helping others find success in ham radio.



Bob Heil, K9EID.



"RIP, man. I love you and miss you already. Sending love to Sarah and to the world of audioheads you leave behind," said rocker Joe Walsh, WB6ACU, in [a Facebook post](#). [Joe Walsh, WB6ACU, photo]



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Recently, his grandson Charlie Hartley, KF0OOP, became a licensed ham to surprise Heil for his birthday. [The pair attended the ARRL Midwest Convention/Winterfest](#) in St. Louis, Missouri, on January 27, 2024.

Heil was a generous donor to amateur radio organizations, including ARRL. Recently, [he donated a host of new audio gear](#) to the Hiram Percy Maxim Memorial Station, W1AW.

His generosity and kind nature will be missed by many, including ARRL Director of Development Kevin Beal, K8EAL.

"Bob was a titan in many areas. He was generous with his time, offered keen insights, and had the heart of a philanthropist in the ARRL Maxim Society," Beal said. "He was a gentleman to his core, making friends easily and everywhere he went, from rock stars to captains of industry. I consider it a real privilege to have become a friend to him, too, all because of amateur radio."

Heil was known for his passion for AM operations. He served for many years as an on-camera host of the Ham Nation podcast. Tributes to Heil have been flooding social media, including from his co-hosts.

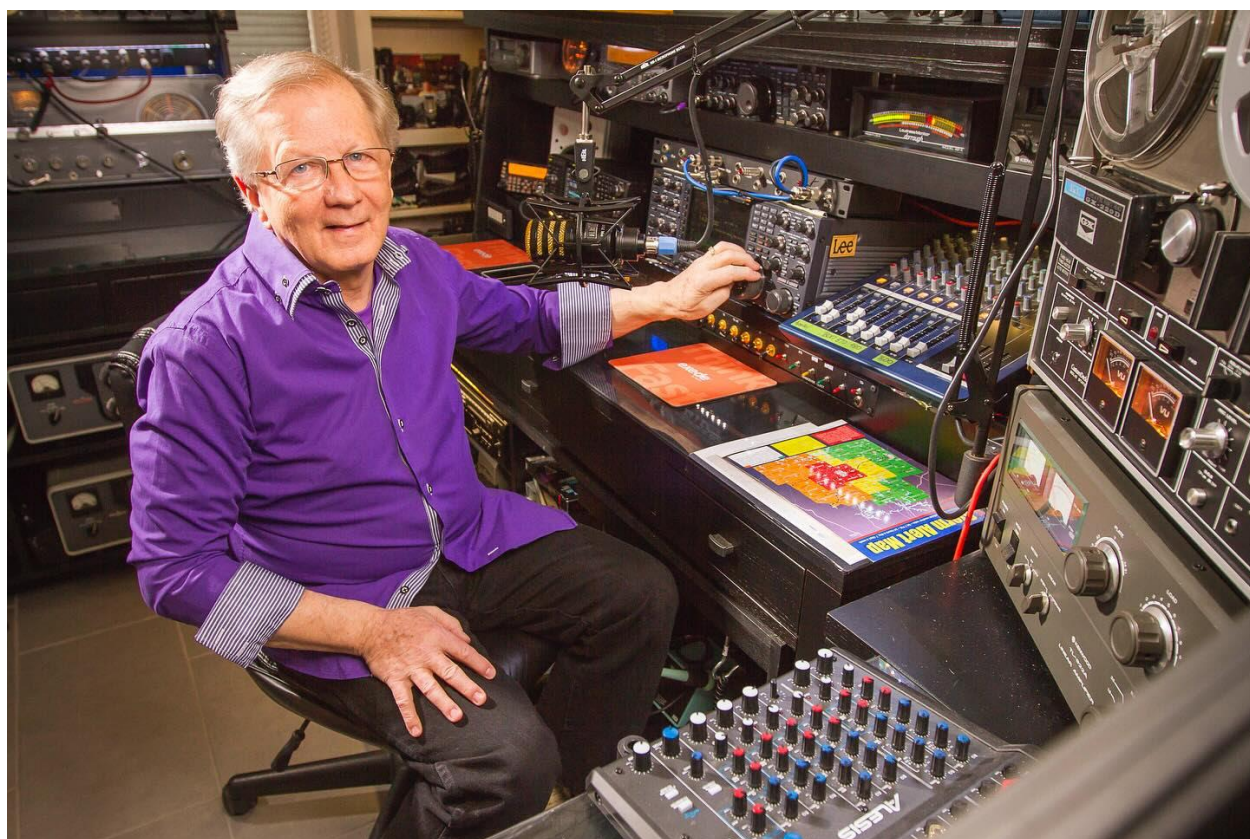
ARRL President Rick Roderick, K5UR, said Heil's passing is a significant loss. "Bob Heil's technical achievements that brought high-quality audio to amateur radio pale in comparison to his generosity and willingness to help his fellow ham. He's long been known as someone eager to help mentor and teach. His legacy on our hobby will be long-lasting. Our thoughts are with his loved ones."



Heil with his grandson, Charlie Hartley, KF0OOP, at the ARRL Midwest Convention/Winterfest.



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Bob Heil, K9EID, 1940 - 2024. [Heil Ham Radio, photo]

Solar Eclipse One Month Away

A total solar eclipse that will be seen across North America will occur on Monday, April 8th. It will be the last of its kind in the US for the next 20 years.



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Hams across North America are asked to participate in a study about how the ionosphere functions by getting on the air to help scientists in a series of ionospheric experiments.

Ham Radio Science Citizen Investigation (HamSCI) has presentations for hams interested in participating on Wednesday, March 27 at 8:00 PM (Eastern) - 5:00 PM (Pacific)*, and that same day at 10:00 PM (Eastern) - 7:00 PM (Pacific)*.

Both 30-minute presentations will held on Zoom and they will feature HamSCI's Festivals of Eclipse Ionospheric Science (FoEIS). The presenters will take your questions during the presentations.

The program will start by covering HamSCI's basis and purpose, and quickly move into why they are conducting experiments, how hams and shortwave listeners (SWLS) can participate, and what they hope to learn from the event. Along the way, they will discuss why the science behind the event is important to users of the high-frequency radio spectrum - including amateur radio operators!

Learn about the HamSCI's eclipse-focused operating events:

- [Solar Eclipse QSO Party](#) (SEQP)
- [Gladstone Signal Spotting Challenge](#) (GSSC)
- [Medium Wave Recording Event](#)
- [Time Delay of Arrival \(TDOA\) Event](#)
- [Grape 1 Doppler Receiver Project](#)

Maritime Mobile Planned

During the solar eclipse, John Landrigan, KA4RXP, will be operating in the SEQP as a maritime mobile off the coast of Mazatlán, Mexico, at the beginning of the total solar eclipse as it transits the Maritime provinces of Canada. Look for KA4RXP/MM around 14.265 MHz.



The 2017 Great American Eclipse. [Sierra Harrop, W5DX, photo.]



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ARRL Podcasts

On the Air

Sponsored by [Icom](#)

The Joys of Being a General

The January/February 2024 issue of *On the Air* featured a story from Brian McSpadden Gardener, KE8JVX, about "The First-Year Experiences of a General-Class Ham," in which Brian detailed how he got his feet wet as a General, and how he put together his first station for HF. Brian joins this episode of the podcast to tell us a little more about his first year as a General, as well as what he's done since then.



ARRL Audio News

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The On the Air podcast and ARRL Audio News are available on blubrry, iTunes, and Apple Podcasts -- [On the Air](#) | [ARRL Audio News](#).





The ARRL Antenna Book 25th Edition

The ultimate reference for antennas, transmission lines, and propagation.

ORDER NOW!



NEW!

Announcements

Pi Day is on the menu for amateur radio on March 14, 2024. Pi Day, 3/14, is a day when mathematicians, scientists, and math lovers around the world celebrate the



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mathematical sign pi, which is a never-ending number. The [David Sarnoff Radio Club](#) (DSRC) will operate special event station N3P on March 14 from 0000Z to 2359Z, in conjunction with Princeton University's Pi Day celebration and the Einstein Birthday Party held in Princeton, New Jersey. Albert Einstein was born on March 14, 1879. When contacting N3P, make sure to say, "happy Pi Day" and include the state, province, country, and/or grid square from which you are celebrating. The operating frequencies will be 14.031, 14.314, 7.031, and 7.227 MHz. If propagation allows, contacts can also be made 10 and 80 meters. DSRC's local repeater will also be operative on 146.46 +1 MHz, PL 131.8, and 443.4 MHz. Look for N3P on standard FT8 and FT4 frequencies. There may be additional activity on PSK31 around 7070+ and 14070+, or even RTTY. For more information, see [DSRC's special event page](#).

In Brief...

On February 27, 2024, five amateur radio clubs in the Dominican Republic activated special event station HI180RD to celebrate the 180th anniversary of the country's independence from Haiti. Until 2359 UTC on April 30, more than 25 HI180RD amateur radio operators will be on the air daily. Activations are on all HF bands, SSB, and digital modes on 14.326 +/- 20 KHz, 21.325 +/- 20 KHz, 24.980 +/- 20 KHz, and 28.380 +/- 20 KHz, including VHF/UHF frequencies for local stations. QSL certificates are available via [QRZ.com](#). For additional information, contact Mejico Angeles-Lithgow, HI8MA/KQ4IPX, at angeles.m@claro.net.do. The announcement of the Dominican Republic's separation from Haiti took place at the Gate of Mercy in Santo Domingo on February 27, 1844, which is also where the country's tricolor flag was hoisted for the first time.

The National Conference of Volunteer Examiner Coordinators (NCVEC) Question Pool Committee (QPC) has removed one General-class license question. The QPC of the NCVEC has deleted question G1E09 from the General-class pool because they have determined the question is defective and must be withdrawn. They discovered that, as worded, the question is showing the wrong correct answer. Question G1E09 must be withdrawn from the pool effective immediately and should be removed from examinations as soon as possible. Updated question pool files, including the errata and new information, have been posted on the NCVEC General-class question pool web page at <https://www.ncvec.org/index.php/2023-2027-general-question-pool-release>. The current Element 3 General question pool became effective on July 1, 2023, and it is valid through June 30, 2027. The ARRL VEC advises the community to regularly check the NCVEC website at <http://www.ncvec.org/> for updates to the question pools, which may include errata and withdrawn questions.



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The K7RA Solar Update

Tad Cook, K7RA, of Seattle, Washington, reports for this week's ARRL Propagation Bulletin, ARLP0010:

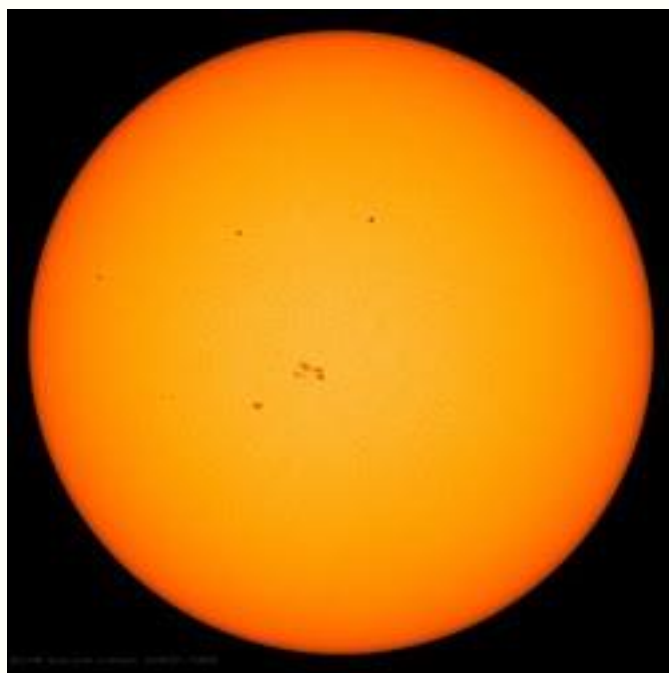
New sunspot groups emerged every day over the past reporting week of February 29 through March 6.

One new sunspot group appeared every day on February 29 through March 3, two new groups appeared on March 4, and another appeared on March 5.

It seems odd, but the average daily sunspot number was about the same (changing from 106.4 to 106.7), while the average daily solar flux had a substantial drop from 175 to 147.4.

Average daily planetary A index was up from 8.4 to 10, while middle latitude numbers rose from 7.4 to 8.

The March 3 planetary A index was 29. [Spaceweather.com](https://www.spaceweather.com) reported a G2 geomagnetic storm at 0930 UTC. On



This solar disk image was taken on March 7, 2024.
[Photo courtesy of NASA SDO/HMI]



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March 7, they reported that the National Oceanic and Atmospheric Administration (NOAA) expects a minor storm on March 9.

The solar flux forecast predicts a short-term peak at 180 on March 21 - 23, and another on April 17 - 19.

Predicted solar flux is 135 on March 7; 140 on March 8 - 9; 145 on March 10 - 12; 140 and 160 on March 13 - 14; 170 on March 15 - 16; 165, 160, 170, and 175 on March 17 - 20; 180 on March 21 - 23; 175 on March 24 - 25; 170 on March 26 - 27; 160 on March 28 - 29; 165 and 145 on March 30 - 31, and 140 on April 1 - 2.

Predicted planetary A index is 5 on March 7; 8 on March 8 - 10; 5 on March 11 - 23; 15, 12, 12, 5, 10, and 8 on March 24 - 29, and 5 on March 30 through April 5.

Sunspot numbers for February 29 through March 6, 2024, were 107, 120, 91, 90, 113, 121, and 105, with a mean of 106.7. The 10.7-centimeter flux was 164.1, 152.8, 152.3, 145.5, 139.9, 141.5, and 136, with a mean of 147.4. Estimated planetary A indices were 4, 9, 5, 29, 10, 7, and 6, with a mean of 10. Middle latitude A index was 4, 9, 3, 20, 8, 7, and 5, with a mean of 8.

Send your tips, questions, or comments to k7ra@arrl.net.

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers Mean...", and [check out](#) the Propagation Page of Carl Luetzelschwab, K9LA.

A propagation bulletin [archive](#) is available. For customizable propagation charts, visit the [VOACAP Online for Ham Radio](#) website.

[Share](#) your reports and observations.

A weekly, full report is posted on [ARRL News](#).

Just Ahead in Radiosport

- March 9 -- YB DX RTTY Contest (digital)
- March 9 - 10 -- SARL VHF/UHF FM Contest (phone)
- March 9 - 10 -- SARL Field Day Contest (CW, phone, digital)
- March 9 - 10 -- RSGB Commonwealth (BERU) Contest (CW)
- March 9 - 10 -- DIG QSO Party, SSB (phone)
- March 9 - 10 -- EA PSK63 Contest (PSK63)



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- March 9 - 10 -- South America 10m Contest (CW, phone)
- March 9 -- AGCW QRP Contest (CW)
- March 9 - 10 -- Stew Perry Topband Challenge (CW)
- March 9 - 10 -- Oklahoma QSO Party (CW, phone, digital)
- March 9 - 10 -- Tesla Memorial HF CW Contest (CW)
- March 9 - 10 -- Idaho QSO Party (CW, phone, digital)
- March 10 -- [North American Sprint](#), RTTY (digital)
- March 10 -- UBA Spring Contest, 2m (CW, phone)
- March 10 -- FIRAC HF Contest (CW)
- March 10 - 11 -- All Wisconsin QSO Party (CW, phone, digital)
- March 11 -- 4 States QRP Group Second Sunday Sprint (CW)
- March 13 -- RSGB 80m Club Championship (CW)
- March 13 - 17 -- AWA John Rollins Memorial DX Contest (CW)

Visit the [ARRL Contest Calendar](#) for more events and information.

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Upcoming Section, State, and Division Conventions

- March 8 - 9 | [Acadiana DX Association Hamfest & Swapmeet](#), hosting the ARRL



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Louisiana State Convention, Rayne, Louisiana

- March 16 | [49th Annual Stuart Hamfest](#), hosting the ARRL Southern Florida Section Convention, Stuart, Florida
- March 16 | [St. Patrick's Day Hamfest](#), hosting the ARRL West Texas Section Convention, Midland, Texas
- April 6 | [Raleigh Hamfest](#), hosting the ARRL Roanoke Division Convention, Raleigh, North Carolina
- April 12 - 13 | [Green Country Hamfest 2024](#), hosting the ARRL Oklahoma State Convention, Claremore, Oklahoma
- April 20 | [Delmarva Amateur Radio and Electronics Expo](#), hosting the ARRL Delaware State Convention, Georgetown, Delaware
- May 11 | [ARRL Nebraska State Convention](#), Lincoln, Nebraska
- May 17 - 19 | [Dayton Hamvention](#), hosting the ARRL National Convention, Xenia, Ohio

The [ARRL Hamfest and Convention Database](#) to find events in your area.

Have News for ARRL?

Submissions for the ARRL Letter and ARRL News can be sent to news@arrl.org. --
John E. Ross, KD8IDJ, ARRL News [Editor](#)

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- Listen to [ARRL Audio News](#), available every Friday.
- *The ARRL Letter* is available in an accessible format, posted weekly to the [Blind-hams Groups.io](#) email group. The group is dedicated to discussions about amateur radio as it concerns blind hams, plus related topics including ham radio use of adaptive technology.



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- [NCJ -- National Contest Journal](#). Published bimonthly, features articles by top contesters, letters, hints, statistics, scores, NA Sprint, and QSO parties.
- [QEX -- A Forum for Communications Experimenters](#). Published bimonthly, features technical articles, construction projects, columns, and other items of interest to radio amateurs and communications professionals.

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